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REPORT NO. 10



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Colling Fiber and Processing Test Results

CROP of 2 1978



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 12, 1979

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season. 1/ These reports are available on request from the Standards Section, Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN. 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1977, USDA, AMS, Cotton Division, August 1978.

Discussion of Test Results

Cottons tested from the Southwest through January 5 in the short staple range are shorter and less uniform than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Cottons are finer and stronger at zero gage strength tests. Both Shirley Analyzer and picker and card waste are higher than last season at this stage of the harvest. Yarns spun from these samples are weaker but have higher appearance grades. Imperfections are lower. The spinning potential yarn number is lower.

Medium staple samples tested from the Southeast are longer, finer and stronger than a year ago. Shirley Analyzer nonlint content is higher while picker and card waste is slightly lower. Yarns spun from these samples show skein strength to be higher. Yarn imperfections are lower. The spinning potential is higher.

South Central medium staple samples tested show fibers to be shorter and stronger at zero gage than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker but show a lower imperfection count. The spinning potential is lower.

Medium staple samples tested from the Southwest are considerably shorter, less uniform, coarser and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are slightly weaker and have lower appearance grades. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples tested from the West to date show cotton fibers to be longer, less uniform and slightly coarser than a year ago. Both Shirley Analyzer and picker and card waste are higher. Yarns spun from these samples show approximately the same yarn quality characteristics as a year ago.

Average results for all medium staple samples tested show fibers to be less uniform and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples show slightly lower appearance grades. Yarn imperfections are lower. The average spinning potential yarn number is lower.

No long staple lots were received from the Southeast or South Central areas during this period.

Long staple samples tested from the West are shorter, less uniform, finer and weaker than a year ago. Picker and card waste is higher. Carded yarns spun from these samples are weaker. The spinning potential is lower.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through January 5, 1979 $1/\sqrt{1000}$

					.1					~	4 -									
מ			Spin.	ent.	n No.	49,	42	51	58	57	51 .	54	20	67	29	59	26			,
		ılts		r Potent	Yarn	/51 - 13/	(14)	1	(77)	1	(55)	1 6	(80)	1 ((11)	1 (3
		t resu	ity	actions	Yarn Yarn	13	6	21	15	22	FT -	19	7P	22	17	21	70			2
		Frocessing test results	Yarn quality	ance	Carded	109	/11/	92	3.5	95	6	90	79	86	6	91	2		,	2
1/		rrocess	Skei		22s	99		96	100	104	2	100	66	118	2	106				4(22s)
			P & C	Waste		5.4	?	6.1	•	6.0		5.7	;	5.3		5.8			-	0.0
5, 1979		strenoth	S A	nonting Pet.		3.2		3.2)	3.5 5.5		3.2	•	2.6		3.2				0
Jamuary 3, 19/9			_	gage G/tex		22		22		23		22		26 25		23			,	1 .
arr oaku	results	Fiber	72	Mpsi		88		85 86		88 88		86 89		93 94		88 90			Q	
	Fiber test	Mike	fine- ness	Rdg.		42		47		97 97		42		74 74		45			0.2	of model
		raph	50/2.5 unif.	Pet.		46		45		45		46 45		45		46			8	samples
		Fibrograph	2.5% span	Inches		96.		1.08		1.11		1.08		1.11 1.14		1.10			0.02	umber of
		Lots	rested	No.		97		39		123 124		48		86 1		296 1 280 1			0	limited n
	Staple group	Area, and	Crop year		Short Staple: Southwest	1977 1978	Medium Staple Southeast	1977 1978	South Central	1977 1978	South West	1978	West	1978	rage	1978		Significant dif-	ference 2/	Based on a limited number of
1			-		Sh		Med		S		S		We		U.S.			Sign	fe	<u>ار</u>

Minimum differences considered to be significant for comparisons in this table. Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument. of samples of modal quality ત્યો ભા

ng tests from selected gin points in the United States	1/ (Continued)
Averages of fiber and processing tests from selected	through January 5, 1979
Table 1Cotton:	

SPY	No.	58	63	93		1		۳ ا	
ctns	No	۱۳	1 9	10		1 1		α	
	No.	18	24	27 28		١ ٦		ο.	
ity rance combed	Indx	126	123	- 42	NS	1 1		5	
Appea	Indx d & Con	102	97	89	ED YAR	114		5	٥
Yar th ombed c	Lbs.	128	133	138	COME	i i		t(22s) 2(50s)	is tab
Streng arded c	Lbs.	99	106	130		65			t ut su
<u> </u>	Pet.	3/ - 16.6	17.4	17.5		15.1		0.5	of modal quality
P&C Waste	Pct.	7.1	7.2	6.2	PIMA	7.6		0.5	quality
SA Non- lint	Pet.	3.5	4.3	3.5	RICAN 1	3.1		0.5	modal qua
gth 1/8" gage	G/tx	23 24	24	27	AME	35		1	of mc
Stren Zero gage	Mpsi	88	92	92		103		N	samples
Mike	Rdg.	747	45	40		38 1		0.2	
h Unif	Pct.	45	45	97 97		33		8	umber of samp
Span	In.	1.13	1.16	1.18	ARRAY	1.50		0.02	
Lots	No.	12	നന	0 4	,	0 6			limi
Area, and Crop year			South Central 1977 1978	West 1977 1978	Extra Long Staple:	west 1977 1978		Significant Difference 2/	1/ Based on a limited number of
	and Lots Span Unif Mike Zero 1/8" Non- Waste Waste Carded combed carded combed card card combed card combed card combed card combed card combed card card card card card card card car	year Lots Span Unif Mike Zero 1/8" Non- Waste Waste Strength Appearance Imprfetns No. In. Pct. Rdg. Mpsi G/tx Pct. Pct. Pct. Lbs. Lbs. Lbs. Indx Indx No. No. Carded & Combed Yarn	and Lots Span Unif Mike Zero 1/8" Non- Waste Raste Strength Appearance Imprfctns gage gage lint Non- Waste Raste Carded combed carded combed carded combed combed carded combed sard combed 12	Lots Span Unif Mike Zero 1/8" Non- Waste Strength Appearance Imprfctns Span Unif Mike Zero 1/8" Non- Waste Strength Appearance Imprfctns Imprfctns Span Unif Mike Zero 1/8" Non- Waste Strength Appearance Imprfctns Imp	Lots Span Unif Mike Zero 1/8" Non- Waste Strength Strengt	and for Span Unif Mike Sero 1/8" No. 101 Mike Sero 1/8" No. 101 Mike Sero 1/8" No. 101 Maste Rage Int. 101 Maste Rage Int. 102 Maste Rage Int. 102 Maste Rage Int. 102 Maste Rage Int. 102 Maste Rage Int. 103 Maste Rage Int. 104 Maste Rage Int. 104 Maste Rage Int. 104 Maste Rage Int. 104 Maste Rage Int. 105	Lots Span Unit Strength Strength	Lots Span Wink Strength Non- Waste Waste Combet Strength Appearance Impricting Span Wink Strength Waste Waste Combet Strength Appearance Impricting Span Wink State Rage Rage State Int Rage Rage State Int In	Sizemetrial Sizemetrial

 $\overline{2}/$ Minimum differences considered to be significant for comparisons in this table. $\overline{3}/$ Data not available except in the summary.

Table 2 -- Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

ī	، 1		1		44	33	46	84	53	84	45	94	51	44	
	Spin.	tial	외) 60 II	(2)	6 0	(2)	(2)	(0)	(0)	(0)	(7)	60)	
	L'ns ards	22sor 27 tx	No		1, 10 11) 10	6 () 12) 12) 13	8	01 (01 ((10)	
ls si	Imprfect'ns Neps/M Yards	8s or 22sor 74 tx 27 tx	N 0 1		28 (22) 30 (8)	29 (14)	24 (10)	24 (18)	33 (6)	(4) 25	23 (4)	26 (18)	30 (8)	31 (10	
Carded Yarns	Nep		Ż												
Carde	Appearance Index	22sor 27 tx	임		100	110	110	110	120	110	120	120	130	120	
Lts -	Appeara	8s or 74 tx	S		120 130	130	130	130	120	130	120	130	130	130	
Test Results -	u _C	22s or 27 tx	Pet		6.6	6.5	6.1	9.9	7.5	6.8	6.5	6.5	7.0	6.3	
Test	Elongation	or 228] `												
Processing	Elo	8s or 74 tx	Pet		PERCENT 94 7.2 96 7.0	PERCENT 88 7.3	PERCENT 93 7.0	PERCENT 93 7.5	CENT 8.7	PERCENT 95 7.8	PERCENT 96 7.5	PERCENT 98 7.2	PERCENT 98 7.9	PERCENT 91 7.3	
Proc	th	22s or 27 tx	Ibs						70 PERCENT 161 8.) PER 96				
	Strength	8s or 74 tx	Trps		80 280 290	270	279	75	298	292	80	80 293	303	279	
	P & C	Waste 8	Pet		6.2	7.6	6.1	7.2	8.0	8.4	8 • 8	7.6	8 8	3.5	
-	1		1												
	Color Raw Stock	Gra Yel	읽		2 m m 4	2 4	9	2 4	1 3	m	en m	м М	3	9	
			Pct No			m									
	S.A.		집		3.1	A5	3.7	4.2	5.3	4.9	4.0	3.6	5 • 5	5.5	
ts	Elon-	1/8"	Pet		FRIPPER 32 6.7 22 5.9	IGHTMASTER 2 7.2	YMASTER 303 2 6.3	6111	7.9	6.7	7.0	9.9	7.8	8 31 6.8	
Results		= o	iği iği		IPPE	GHTM,	MASTI	NKART	A71	A71	RIPPER 31	APAW 3	A71	RIPPER	
Test	Fiber Strength	1/8" Gage	1		STR 22 22	8L I 22	PAY! 22	LAN 21	65A	6SA 22	STR 24	QUA 23	65A 24	STR 23	
Fiber Test	Stre	Zero	Mpsi		84 89	88	87	82	84	83	89	87	83	89	
	Mike		Rdg		32	36	36	97	30	35	42	37	33	41	
	t] tph	Unif	Pet		45	42	45	77	43	45	77	44	5 7	45	
	Digital Fibrograph				01	91	00	80	03	76	96	86	96	92	
-	Fi	le span	티		1.01	0.91	1.00	1.98	1.03	16.0	96*0	0.98	0.96	0.92	
		Stple	32s	AREA	32 32	30	2 32	$42^{\frac{2}{3}}$	1 33	$42^{\frac{3}{2}}$ 32	31	32	1 33	2 31	
Ares	mber	ode			TEXAS	P 42	p 42		41		P 42	P 42	51	52	
Production Area,	& Sample Number	Grade Name & Code		ST	ST TE	A LT SP	IZO LT SP	LT SP	S	VIEW LT S	LT SP	LT SP		T SP	
Produ	Sami			SCUTHWEST	NCRTHWEST KRESS 1 SLM 2 SLW LT	LAMESA 2 SLM LT	LORENZO 3 SLM LT	PADUCAH SLM LT	PLAINS 1 SLM	PLAINVIEW 2 SLM LT SP	POST 2 SLM LT	SUDAN 3 SLM LT	TCK 10	TULIA 1 LM LT	
.		No.		SCL	NCR 1	2	3	1	1	2	2	" m	-		

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument. $\frac{2}{3}$ / Reduced from 32 because of bark. $\frac{2}{3}$ / Reduced from 42 because of bark.

Table 2 -- Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

1	ι.		1.	51	64	47	94
	Imprfect'ns Spin. Neps/M Yards Poten-	tial	요	$27 (14)^{1/10} (6)^{1/51}$	30 (14) 12 (0) 49	66	(2)
	ns S	t t		10	12 (8 (0)	6 (2)
	Imprfect'ns Neps/M Yard	r 22s x 27	욄	(14)	(14)	25 (16) 25 (18)	54 (4)
arns	Impr	8s or 22sor 74 tx 27 tx	외	27	30	25	54
Processing Test Results - Carded Yarns	rance	8s or 22sor 8s or 22sor 74 tx 27 tx 74 tx 27 tx	<u>N</u>	110	120	120	120
ults - (Appearance Index		N O	130	130	130	130
rest Res	Elongation	8s or 22s or 8s or 22s or 74 tx 27 tx	Pct Pct	7.2	4.9	6.3	6.4
essing	Elong	c 8s or 74 tx		PERCENT 92 7.9	CENT 7.4	CENT 7.5 7.4	PERCENT 95 7.4
Proc	ngth	22s a	죕	m	75 PERCENT 322 102 7.4	99 PERCENT 93 7.	0
	Strength		I.bs	289	322	288 290	279
	Color Raw Stock P & C	Waste	Fet Bet	7.1	8.0	5.7	7.7
	Color w Stock	Yel	외	2	4	m 4	m
	Cc Raw	Gra	일	2	т	77	m
	S.A. Non-		let Let	4.1	6.1	3.00 2.00	4.0
ılts	Elon- gat'n 1/8"		Pet	SP21 7.2	%N ₩ 6.6	7.0 7.0 6.9	r 611 7.0
Test Results	Fiber Strength	1/8" Gage	G/tex	TAMCOT SP21	WESTBURN M 25 6.	LANKART 57 22 21 6.	LANKART 611 23 7.0
Fiber Test	Fi	Zero	Mpsi	83	06	84	89
	Mike		왕	38	42	43	43
	ital graph	Unif	Pct	45	43	44	46
	Digital Fibrograph	2.5% span	되	33 1.04	1.02	1.00	66*0
		Stple	32s	33	33	32	32
Area,	per	Je Je		41	45	40	41
Production Area,	& Sample Number	No Grade		WINGATE 1 SLM	OKLAHOMA GREENFIELD I SLM LT SP	MANGUM 1 SLM PLUS 2 MID LT SP	TEMPLE 2 SLM

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3.-Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

								0 -						
	1	Spin. Poten-	al	01	17	33				4 8	53	52		
				일		(242		(336)		(430)	(274)	(238)		
	ct ng	Yard 50s o	12 tx	일	77	14		0) 13	71	81 6	(74) 18 (274)	0) 13 (
2	Imprfect'ns	Neps/M Yards	27 tx 12 tx	<u></u>		19 (56) 14 (242) 33		20 (50) 12 (336)		19 (50) 18 (430)	19 (7	18 (60) 13 (238)		
Y Ay		or or	EX Z			70 1								
Carde	rance	Appearance Index 2s or 50s		Index 22s or 50s or 27 tx 12 tx		≧		70		ά		ه د	0	80
Processing Test Results - Carded Varns	Аррея	Z2s or	27 tx	21			80			100				
t Resu	2	Os or	12 tx Pct			0.4		4.5			7.6	4.5		
Ig Tes	Elongetion	or	تار تار											
essir		or 22s	K 127 t		ENT	7.4		97 PERCENT 1 33 6.4	70 PERCENT	ENT	•	ENT 6.0		
Proc	Strength	508 6	Lbs tx	1	70 PERCENT	62		PERC 33	PERC	PERC)	PERC 35		
	Stre	22s or 50s or 22s or 50s or	Lbs Lbs Pct		02	5		101	70	100 PERCENT	4	106 PERCENT		
			Pet		ប	1								
-	श्र न		-		C.		6.3	6.9	ω		4.7			
	Color	Color Raw Sto Gra Y			4			7	2	2		7		
					4		-	2	1		0			
			lst Ist		6.9			2.8	4.5	2.7		2.2		
83	Elon-	Elon- gat'n 1/8" Pct			P37 6.4	37		6.6	E 55	61		IE 61 6.4		
Results			ă])T SP			71.7	P INE	P INE		PINE 61 6.4		
	Fiber Strength	7.8	1		TAMCOT SP37		Ė	24 6.6	OELTAPINE 55 21 5.9	OELTAPINE 61 23 7.0		0ELTA! 24		
Fiber Test	Fi	Zero Gage	Mpsi		92			87	98	98		0 89		
		Mike	Rdk		_									
		<i>c</i> :			43			50	38	43		48		
	Digital Fibrograph	Unif.	R		77			43	45	44		43		
	D1g F1br		믜		26*(60.	1.12	1.11		1.09		
		Stple	323	AREA	s 52 31 0.92	٧		35 1.09	35 1	35 1		35 1		
Area,	lber	de		AR	52	AREA		41	51 3	41 3		31 3		
roduction Area Classification	Sample Number	Grade Name & Code			TEXA NG P				• 1	7	CN			
Production Area, Classification	Sampl	Name		VEST	RTHWEST TE BIG SPRING LM LT SP		A EYE		Q	ΙA	RN IA			
	-	온		SOUTHWEST	NORTHWEST TEXAS BIG SPRING 1 LM LT SP 5:	WEST	ARIZONA BUCKEYE	3 SLM	MARANA 3 LM	PEORIA 3 SLM	CALIFORNIA WESTMCRIAND	3 MID		
				S	Ž	3	AF		m	m	CA	0		

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 4--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1978.

		Spin. Poten-				$\frac{1}{2}$, 58
		<u> </u>				9 (29 9 (32
		ect'n	7 Yar 50s	일		$\frac{1}{24}$ 1 24) 1 24)
	arns	Imprfect'ns	Neps/M Yards 22s or 50s or 27 tx 12 tx			$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Processing Test Results - Carded Yarns		or	일 일 일		70 90
	lts -	Appearance	22s or 27 tx	잃		100
	st Resu	tion	50s or 12 tx	Pet		4.6 5.2
	sing Te	Elongation	22s or 27 tx	Pet		F 4
	roces	٠,	s or	Lbs		73
	Œ.	Strength	or 50			38 PERC 35 44
		Str	22s 27 t	rog		9 103 125
		Color P&C	Comber	Pet		3 9.8 * 17.6
		Color aw Stock	Yel	81		m *
		Co] Raw	Gra	8		2
		S.A.	Lint	Pet		4.1
	N N	Elon- S.A.	1/8"	Pet		5.6 4.1
	esul1		= 9	g/tex		<u> </u>
	est F	Fiber Strength	1/8" Gage	C		COKEI 24
	Fiber Test Results	Fi	Zero Gage	Mpsi		885
			Mike Zero Gage	Rdg		36
		al aph	Unif.	Pct		4.2
		Digital Fibrograph	2.5% span	되		51 35 1.11
			Stple	32s	¥	15 1
	rea,	er			AREA	51
	Production Area, Classification	& Sample Number	Grade Name & Code			
	oduct	ample	Gr			EXAS
	A C	Ŋ			ST	WEST TEXAS PECOS 2 LM
		1	No		WEST	¥ E

 $\underline{1}$ / Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

* Comber Waste and Combed Yarn Data

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50s or 80s or 12 tx 7 tx 7 tx Imprfect'ns 읽 80s or 7 tx Appearance Index 읽 Processing Test Results - Combed Yarns 50s or 12 tx 욁 50s or 80s or 50s or 80s or 12 tx 7 tx 12 tx 7 tx Pct Elongation Pet Lbs Strength Lbs Comber Pet P & C Waste Pct Raw Stock Yel 욁 Color Gra 욁 S.A. Non-Lint Pet Elon-gat'n 1/8" Pet Fiber Test Results G/tex 1/8" Gage Strength Fiber Zero Gage Mpsi Mike Rdg Pet S Array Length UOL 듸 Stple 32s Production Area, Classification Sample Number Grade Name & Code No

Table 5--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1978.

	1 / 182)	134),	10 (98)	150)
) 1	1	1	0
	(46)	1 (36) 1 (134),	2 (38) 1 (98)	(07)
	2	-	2	7
	5 7.3 4.2 5 6 10.2 14.5 64 35 6.0 5.0 120 120 2 (46) 1 (182)	5 5.6 3.1 4 4 6.8 13.8 68 37 5.7 4.9 11C 120	120	5 6-9 3.1 4 5 7.7 14.9 64 34 6.0 5.3 110 110 1 (40) 1 (150)
	120	110	120	110
	5.0	4.9	4.8	5.3
	0.9	5.7	5.6	0.9
	7 35	37	7 36	7 34
	PERCEN 64	PERCEN. 68	PERCEN'	PERCEN'
	100	100 1	5 6.7 4.2 4 4 7.2 15.2 66 36 5.6 4.8 120 120	100 6
	10.2	6.8	7.2	7.7
	9	4	4	5
	5	4	4	4
	4.2	3.1	4.2	3.1
	S-5 7.3	5-5	5-5	5-5
	PIMA S-5	PIMA S-5	PIMA S-5	PIMA S-5
		102	103	100
	38	38	07	35
	34	32	33	33
	1.51	1.47	1.50	1.56
AREA	46	94	46	94
	Ŋ	4	4	4
WEST	ARIZONA SAFFORC 1	TONOPAH 2	WENDEN 2	WEST TEXAS EL PASG 2

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.